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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,255

05/04/2005

Luc Moens

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EXAMINER

TOSCANO, ALICIA

ART UNIT

PAPER NUMBER

1712

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,255	MOENS ET AL.	
	Examiner	Art Unit	
	Alicia M. Toscano	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/25/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 11 is objected to because of the following informalities: stabilizers, line 3 of claim 11, is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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2. Claims 1, 2, 4-14 and 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Daly (US 6294610).

Daly discloses powder coatings. Said coating comprise a glycidyl group containing copolymer (Column 5 Lines 42-65). Said glycidyl copolymer has a weight average MW of 200 to 2000. The weight average MW is lower than the number average MW and as such it is the Examiners position that the weight average MW of between 200 to 2000 meets the limitations of a number average MW of between 2000 to 5000 since the ranges are so close to each other. The Tg of the glycidyl copolymer is from 40 to 60C, meeting the requirements of both (A) and (A').

Said coating also comprises a carboxylic acid group containing polyester (Column 3 Lines 49-Column 4 Line 30). Said carboxylic polyester has an acid number from 15 to 200 and a Tg from 40 to 65, meeting the requirements of both (B) and (B').

Said coating further comprises a carboxylic acid group containing acrylic copolymer (Column 4 Lines 32-Column 5 Line 16). Said carboxylic acrylic polymer has an acid number of between 15 and 200, a Tg of 40-60 and a weight average MW of 1000-20,000. The weight average MW is lower than the number average MW and as such it is the Examiners position that the weight average MW of between 1000-20,000 meets the limitations of a number average MW of between 2000-5000 since the ranges are so close to each other, meeting the requirements of both (C) and (C').

A catalyst is further disclosed in Column 6 Line 11.

Claim 1 further includes a limitation which necessitates the use of at least one low glass transition temperature polymer (A'), (B') and (C'), it is the Examiners position

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that this is inherent in Daly because the Tg ranges of Daly's 3 polymer components each meet the range requirements of both the high and low Tg polymers.

Alternatively, Daly anticipates use of high Tg polymers, but does not specify using at least one low Tg polymer in his composition. A case of prima facie obviousness exists in cases where the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541, F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 91 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). The claimed ranges of Daly have sufficient specificity that it would have been prima facie obvious include in Daly the use of a low Tg polymer in his composition since his claimed range overlaps with both the low and high Tg ranges of Claim 1.

The epoxy equivalent weight of the acrylic copolymer is 200 to 1000, the MW of the copolymer is 200 to 2000 (Column 5 Lines 48-50), thus, the epoxy equivalent weight per gram of acrylic copolymer may be 1 (200/200), meeting the requirements of Claim 2. The carboxyl acrylic polymer may comprise 100% maleic acid (Column 4 Line 49), meeting the limitations of Claim 4. The carboxylic polyester may range from amorphous to crystalline, which includes semi-crystalline, and the acid numbers and MWs of said polyester are as set forth above. As the compositional requirements are met the Examiner finds the viscosity of Claims 5 and 6 and the fusion zone and degree of crystallinity of Claim 6 to inherently be met, thus all the requirements of Claims 5 and 6 are met by Daly. The carboxylic polyester may comprise only terephthalic acid or isophthalic acid (Column 4 Line 6) and neopentyl glycol (Column 3 line 62) or 1,2 ethanediol and the like (Column 3 line 61), as required by Claims 7 and 8. The

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resulting polyester is inherently linear or branched depending on the glycol discussed above, meeting the requirements of Claim 9. The catalyst may be phosphonium bromide (Column 6 line 11), as required by Claim 10. Use of flow modifiers is disclosed in Column 6 lines 8-9, as required by Claim 11. A clear coating is disclosed in Column 6 line 3, as required by Claim 12. Fillers may be added as disclosed in Column 6 line 6, as required by Claim 13. Use of electrostatic tribocharging spray coating is disclosed in Column 6 Lines 39-45, as required by Claim 14 and coated surfaces, which are inherently partially or entirely coated, are disclosed in Column 6 lines 43-45, as required by Claim 17.

3. Claims 1, 2, 4-14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daly in view of Pettit (5202382).

Daly includes elements of the invention as discussed above. Daly discloses the use of 3 different polymer components in his powder coating, all having a Tg of 40-65, or a high Tg. Daly does not explicitly include the use of a low Tg polymer mixed with a high Tg polymer for his powder coating composition.

Pettit discloses thermosetting powder coating compositions. Said compositions comprise a low Tg (Tg -20 to +30) and a high Tg (Tg 40 to 100) polymer. Pettit discloses powder composition which have only a high Tg polymer to be difficult to process and to have poor mixing capabilities (Column 1 Lines 40-52). Inclusion of a low Tg polymer results in good processability and improved blending and pigment dispersions (Column 1 Line 65-Column 2 Line 6).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Daly the use a Tg between -20 to +30 for any one of the three polymer components, as taught by Pettit, in order to improve the processability and blending of his powder composition. Thusly, the teaching of Pettit and the compositional elements of Daly, as discussed above, meet the requirements of Claims 1, 2, 4-14 and 17.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daly or Daly and Pettit in view of Murakami (US 4499239).

Daly and Pettit include elements of the invention as discussed above. Daly and Pettit do not disclose the monomer composition of the glycidyl methacrylate copolymer (Column 5 Line 46 of Daly).

Murakami discloses glycidyl methacrylate copolymers. Said copolymers comprise 40-80% of monomers such as glycidyl acrylate (Column 2 Lines 8-15) the remaining comprising vinyl monomers comprising styrene, acrylonitrile and the like (Column 3 Lines 45-49). Said acrylate copolymers are added to the composition in order to improve the surface characteristics (Column 1 Lines 25-30).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Daly and Pettit the use of the glycidyl methacrylate copolymers with monomers as discussed above, as taught by Murakami, in order to improve the surface characteristics of the coating composition, as required by Claim 3.

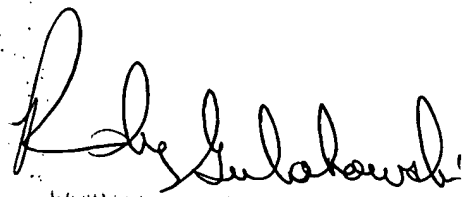
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Toscano whose telephone number is 571-272-2451. The examiner can normally be reached on Monday to Friday 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMT


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